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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,267	09/18/2001	Barry Freel	6340/16	8699
7590 01/13/2004				
BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610			EXAMINER NGUYEN, TAM M	
			ART UNIT 1764	PAPER NUMBER

DATE MAILED: 01/13/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/955,267

Applicant(s)

FREEL ET AL.

012

Examiner

Tam M. Nguyen

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

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## **DETAILED ACTION**

### ***Response to Amendment***

The rejection of claim 3 under 35 USC § 102(b) as anticipated by Ward et al. (4,428,862) is withdrawn by the examiner in view of the amendment filed on October 30, 2003.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freel et al. (5,792,340) in view of Ikura et al. (5,120,428)

Freel discloses a method for the fast pyrolysis of carbonaceous materials (e.g., heavy oil, coal, and petroleum derived liquids) involving rapid mixing. (See abstract; col. 6, line 64 through col. 7, line 43; col. 12, lines 9-27; claim 1)

Freel does not disclose a product having physical and chemical characteristics as claimed in claim 1.

Ikura discloses a heavy hydrocarbon oil (e.g., Saskatchewan) (see col. 2, line 49-50; col. 3, lines 40-41).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Freel by using the Saskatchewan heavy oil of Ikura because any heavy oil including the Saskatchewan oil can be employed as a feedstock in the process of Freel and the Saskatchewan oil would be effectively upgraded in the process of Freel because the Saskatchewan oil is a heavy oil. The liquid product of Freel that would result from the use of the oil of Ikura would have the claimed characteristics because the same feed is treated in the same process at the same conditions. (See the present specification, page 30, line 22 though page 36, line 3)

Regarding claim 3, since the product of the combined process of Freel and Ikura is similar to the claimed liquid product, it would be expected that the liquid product of the combined process would have at least one of the characteristics as claimed in claim 3.

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Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freel et al. (5,792,340) in view of Ignasiak et al. (5,338,322)

Freel discloses a method for the fast pyrolysis of carbonaceous materials (e.g., heavy oil, coal, and petroleum derived liquids) involving rapid mixing. (See abstract; col. 6, line 64 through col. 7, line 43; col. 12, lines 9-27; claim 1)

Freel does not disclose a product having physical and chemical characteristics as claimed in claim 2.

Ignasiak discloses Athabaska bitumen (see col. 4, line 36).

Regarding claim 2, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Freel by using Athabaska bitumen of Ignasiak because any carbonaceous materials can be employed as a feedstock in the process of Freel. Therefore, Athabaska bitumen can be effectively upgraded to more valuable products such as fuel in the process of Freel. The liquid product of Freel that would result from the use of the bitumen of Ignasiak would have the claimed characteristics because the same feed is treated in the same process at the same conditions. (See the present specification, page 36, line 5 through page 39, line 9)

Regarding claim 3, since the product of the combined process of Freel and Ignasiak is similar to the claimed liquid product, it would be expected that the liquid product of the combined process would have at least one of the characteristics as claimed in claim 3.

Regarding claims 4 and 5, Freel does not disclose a VGO (vacuum gas oil) having a measured aniline point from about 110 to 130° F, a calculated aniline point from about 125 to 170° F, and comprising about 38 % of mono-aromatics. However, it is known in the art that a

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VGO is a hydrocarbon fraction having a boiling point of from about 650 to about 1025° F.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Freel/Ignasiak by refining the product to produce a VGO fraction as claimed because one of skill in the art would produce a VGO fraction from the liquid product because VGO is a valuable product in many applications such as a source of energy. The VGO fraction of Freel would inherently have the claimed characteristics because the same feed is treated in the same process at the same conditions. (See the present specification page 46, line 25 through page 47, line 10)

### *Response to Arguments*

The argument that Freel does not particularly teach or suggest the use of Saskatchewan heavy oil and Ikura does not specifically teach or suggest the use of rapid thermal processing to upgrade a Saskatchewan heavy oil is not persuasive because Freel discloses that any heavy oil can be used in the rapid thermal process. Hence, one of skill in the art would use any heavy oil that is available including heavy oil from Canada (e.g., Saskatchewan heavy oil) as taught by Ikura.

The argument that Freel does not particularly teach or suggest the use of Athabaska bitumen and Ignasiak does not specifically teach or suggest the use of rapid thermal processing to upgrade an Athabaska bitumen is not persuasive because in the Freel process, any carbonaceous material which is breakable to a smaller compound can be used in the process. Hence, one of skill in the art would use any hydrocarbon that is available including a bitumen as taught by Ignasiak.

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The argument that Freel does not particularly teach or suggest the use of VGO is not persuasive because VGO is a known hydrocarbon fraction. One of skill in the art would produce a VGO fraction in the modified process of Freel because VGO is a valuable product for many applications.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (571) 272-1452. The examiner can normally be reached on Monday through Thursday.

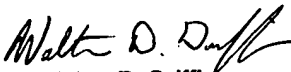
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Tam M. Nguyen  
Examiner  
Art Unit 1764

TN

  
Walter D. Griffin  
Primary Examiner